

# Geolite Asfalto

Mineral geo-mortar with geo-binder base for road repairs.

Geolite Asfalto is a black, geo-mortar ideal for applications that must be ready for use quickly, to repair industrial and airport flooring, pavements and to anchor and fix road traps, manholes, fences, road signs, protective barriers.



## Rating 4

1. Semi-thixotropic, class R4
2. Rapid setting 20 min
3. Thicknesses from 10 to 100 mm
4. Based on geo-binder
5. Specific for road and street furniture works
6. Can withstand foot and vehicle traffic just 2 hours after application
7. Black colour

- ✓ Regional Mineral  $\geq 60\%$
- × Recycled Mineral  $\geq 30\%$
- ✓  $\text{CO}_2 \leq 250 \text{ g/kg}$
- ✓ VOC Very Low Emission
- ✓ Recyclable

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## Areas of application

### → Use

Applications which must be ready for use quickly even at low temperatures, such as repair of industrial and airport flooring, pavements, drains.

Specific for road and street furniture works.

Fastening and structural anchoring of tie-rods,

plates, machinery, pre-fabricated structures, road traps, manholes, fences, road signs, protective barriers.

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## Instructions for use

### → Preparation of substrates

In case of concrete surfaces, before applying Geolite Asfalto it is necessary to:

- thoroughly remove all weakened concrete until a solid, resistant substrate is obtained; roughen it by mechanical scarification or hydro-demolition to a depth of  $\geq 5$  mm, equivalent to level 9 of the Test kit for preparation of reinforced concrete and masonry substrates;
- remove the rust from the reinforcing bars, which must be cleaned by brushing (manual or mechanical) or sandblasting;
- clean the treated substrate using compressed air or a high pressure washer;
- saturate with water until the substrate is saturated yet with no excess water on the surface.

Alternatively on horizontal concrete surfaces, apply Geolite Base on a dry substrate in order to ensure regular absorption and promote the natural crystallisation of the geo-mortar.

For road applications: clean the substrate as described above. Geolite Asfalto can come into lateral contact with any existing bitumen, but the substrate must still be made of concrete. Considering the instability of road substrates, it is recommended to add suitable fibres to increase ductility (0.75 kg of Steel Fiber for every 25 kg of Geolite Asfalto).

Check that the resistance class of the supporting concrete is suitable.

In case of thick patched layers and on large surface areas, provide a reinforcing welded mesh anchored to the substrate.

### → Preparation

Prepare Geolite Asfalto by mixing 25 kg of powder with the amount of water indicated

on the packaging (we advise using the whole bag). The mixture can be prepared in a cement mixer (bearing in mind the fact that the mortar hardens quickly), or in a bucket using a mortar mixer or a drill-type mixing device with a low-rev agitator until the mixture is smooth and has no lumps.

### → Application

- To fasten elements, apply the mortar by hand using a trowel.

Application thicknesses of Geolite Asfalto shall not be less than 10 mm. For applications involving a thickness of 60-100 mm (according to the type of work to be carried out and the size of the operation), to contain hydration heat, mix up a fine grain concrete, adding Kerabuild Ghiaia in a ratio of 25-30% by weight of the Geolite Asfalto (25-30 kg of Kerabuild Ghiaia for every 100 kg of Geolite Asfalto), so that the granulometric curve is optimised according to the application thickness.

- For grouting of bars, fill the hole previously made with Geolite Asfalto by extruding the material with a special gun and insert the bar with a rotating movement.

Allow the surfaces to cure for at least 24 hrs.

Geolite Asfalto can be applied at room temperatures of  $-10$  °C in the presence of substrates with a minimum temperature of  $+5$  °C; it is advisable to store the product in a heated room. If no special precautions are taken, it is recommended to use Geolite Asfalto at temperatures  $\geq +5$  °C.

### → Cleaning

Residual traces of Geolite Asfalto can be removed from tools and machines using water before the product hardens.

## Certificates and marks



\* Émission dans l'air intérieur Information sur le niveau d'émission de substances volatiles dans l'air intérieur, présentant un risque de toxicité par inhalation, sur une échelle de classe allant de A+ (très faibles émissions) à C (fortes émissions).

## Abstract

*Fastening of road traps, manholes and street furniture, repair of industrial flooring with rapid return to normal use even at low temperatures, by manual application of a certified, mineral, semi-thixotropic, rapid-setting (20 min.) geo-mortar with a geo-binder base, extremely low petrochemical polymer content, free from organic fibres, specific for the anchoring of metal elements, such as Geolite Asfalto by Kerakoll Spa, GreenBuilding Rating 4, CE-marked and compliant with the performance requirements of Standard EN 1504-3, Class R4 for the volumetric reconstruction and strengthening and EN 1504-6 for anchoring, according to Principles 3, 4 and 7 as defined by Standard EN 1504-9.*

### Technical Data compliant with Kerakoll Quality Standard

Appearance	Powder	
Apparent volumetric mass	≈ 1390 kg/m <sup>3</sup>	UEAtc
Aggregate mineral content	silicate - carbonate	
Grading	0-2.5 mm	EN 12192-1
Shelf life	≈ 6 months from production in the original sealed packaging, protect from humidity	
Pack	25 kg bags	
Mixing water	≈ 4 l / 1 x 25 kg bag	
Flow of the mixture	150-170 mm	EN 13395-1
Density of the mixture	≈ 2180 kg/m <sup>3</sup>	
pH of the mixture	≥ 12.5	
Pot life	≈ 30 min. (at +5 °C) / ≈ 25 min. (at +10 °C) / ≈ 15 min. (at +21 °C)	
Start/End of setting	≈ 20-30 min. (≈ 35-40 min. at +5 °C)	
Temperature range for application	from +5 °C to +40 °C	
Minimum thickness	10 mm	
Maximum thickness	60-100 mm (according to the type of work and the size of the operation)	
	for thicker layers, mix Geolite Asfalto with Kerabuild Ghiaia	
Coverage	≈ 19 kg/m <sup>2</sup> per cm of thickness	

Values taken at +21 °C, 60% R.H. and no ventilation. Data may vary depending on specific conditions at the building site.

<b>Performance</b>							
<b>VOC Indoor Air Quality (IAQ) - Volatile organic compound emissions</b>							
Conformity	EC 1 plus GEV-Emicode	GEV Certified 4439/11.01.02					
<b>HIGH-Tech</b>							
Performance characteristic	Test Method	Requirements of standard EN 1504-3, class R4	Geolite Asfalto Performance in CC and PCC (Mpa) conditions				
			-10 °C*	+5 °C	+21 °C		
Compressive strength	EN 12190	≥ 45 MPa (28 days)	2 hrs	> 12	> 15		
			4 hrs	> 12	> 15	> 18	
			24 hrs	> 14	> 30	> 35	
			7 days	> 40	> 40	> 45	
			28 days	> 45	> 50	> 55	
						* Room temperature -10°C for the first 12 hours and thereafter +5°C, substrate and dust temperature +5°C	
Flexural tensile strength	EN 196-1	None					
						+5 °C	+21 °C
			2 hrs	> 2	> 3		
			4 hrs	> 3	> 4		
			24 hrs	> 5	> 7		
			7 days	> 6	> 8		
28 days	> 8	> 9					
Adhesive bond	EN 1542	≥ 2 MPa (28 days)	> 2 MPa (28 days)				
Resistance to carbonation	EN 13295	dk ≤ reference concrete [MC (0.45)]	value exceeded				
Modulus of elasticity under compression	EN 13412	≥ 20 GPa (28 days)	28 GPa in CC 27 GPa in PCC				
Thermal compatibility with freeze/thaw cycles with de-icing salts	EN 13687-1	bond strength after 50 cycles ≥ 2 MPa	> 2 MPa				
Capillary absorption	EN 13057	≤ 0.5 kg·m <sup>-2</sup> ·h <sup>-0.5</sup>	< 0.5 kg·m <sup>-2</sup> ·h <sup>-0.5</sup>				
Chloride ion content (determined on the product in powder form)	EN 1015-17	≤ 0.05%	< 0.05%				
Reaction to fire	EN 13501-1	Euroclass	A1				
Resistance to severe chemical attacks (group 3: unused heating oil, diesel oil and oils for engine and gear)	EN 13529	analysis of damage and bond strength ≥ 2 MPa	no deterioration and bond strengths > 2 Mpa				

	<b>Test Method</b>	<b>Requirements of standard EN 1504-6</b>	<b>Performance Geolite Asfalto</b>
Pull-out strength of steel rebars (movement in mm in relation to a 75 kN load)	EN 1881	≤ 0,6 mm	< 0,6 mm
Chloride ion content (determined on the product in powder form)	EN 1015-17	≤ 0.05%	< 0.05%
Hazardous substances		compliant with point 5.4	
<b>Aggregate performance characteristic</b>	<b>Test Method</b>	<b>Requirements of standard UNI 8520-22</b>	<b>Aggregate performance Geolite Asfalto</b>
Alkali-aggregates reaction	UNI 11504	reactivity class	NR (non-reactive)

## Warning

- Product for professional use
  - abide by any standards and national regulations
  - store the product away from any sources of humidity and out of direct sunlight
  - use at temperatures between +5 °C and +40 °C
  - do not add binders or additives to the mixture
  - do not apply to dirty, loose and flaking surfaces
  - do not lay on gypsum or wood
  - following application, protect from direct sunlight and wind
- allow the product to cure during the first 24 hours
  - if necessary, ask for the safety data sheet
  - for any other issues, contact the Kerakoll Worldwide Global Service +39 0536 811 516 - [globalservice@kerakoll.com](mailto:globalservice@kerakoll.com)



The Rating classifications refer to the GreenBuilding Rating Manual 2013. This information was last updated in May 2022 (ref. GBR Data Report – 05.22); please note that additions and/or amendments may be made over time by KERAKOLL SpA; for the latest version, see [www.kerakoll.com](http://www.kerakoll.com). KERAKOLL SpA shall therefore be liable for the validity, accuracy and updating of information provided only when taken directly from its institutional website. The technical data sheet given here is based on our technical and practical knowledge. As it is not possible for us to directly check the conditions in your building yards and the execution of the work, this information represents general indications that do not bind Kerakoll in any way. Therefore, it is advisable to perform a preliminary test to verify the suitability of the product for your purposes.